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GEO. C. SHATTUCK
AN
INQUIRY
INTO
THE NATURE AND ACTION
OF
CANCER;

WITH A VIEW TO THE ESTABLISHMENT OF A REGULAR MODE OF
CURING THAT DISEASE
BY NATURAL SEPARATION.

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PREFACE.

ON the nature of a disease hitherto so little determined as CANCER, *any* opinions should seem more or less important. It is possible that even error may, in some way, tend to aid the progress of inquiry; and since mere *supposition* has been tolerated, I trust that an attempt to exhibit the origin, progress, and nature of this disease, in some more distinguishable and relative form, will not be deemed *frivolous*.

In this attempt, I have followed NATURE, as closely as the allowed difficulties of the subject would permit; and, however deficient the effort, I cannot but feel gratified if, out of such a chaos, I have selected a *beginning*, and an *end*; and have endeavoured to establish something like *connexion*, which more mature and accurate investigations may happily perfect.

I offer this little work, therefore, rather as a figure on which the eye may rest, and on which the judgment, if not determined, may be safely exercised; —as the first rude sketch of a system, from which

there may, one day, result some distinct and explicit criteria of this disease ; as the faint pencil-ing serves to direct the artist to particular form and subsequent elaboration.

In drawing *my* outline, I have studiously avoided minutiae ; and, while endeavouring to discover a principle for the better understanding, and towards a more regularly defined mode of treating Cancer, have refrained from any practical observations which might prejudice the general question, by leading to partial disquisitions. The profile once struck, particular features may be more accurately filled up, and the minor touches may hereafter be more effectively given.

Be this tract considered then only as the *prospectus* of a zealous individual, on which every candid observation it may have the honour to attract will be gratefully adopted, or, at all events, respectfully considered.

North-Audley-Street,
30th June, 1805.

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C A N C E R.

CHAPTER I.

GENERAL STATE OF THE QUESTION.

To no disease, perhaps, were ever attributed so great varieties of natures, which at the same time appear to be independently direct and self-evident, as to that of CANCER ; and, possibly, opinions on such various and direct natures never appeared, in any other disease, to be so indirectly, so indefinitely, supported

In one instance it is asserted, that the matter of this disease is *specific* ; in another, that its *action is constitutional* ; in a third, it is spoken of as *hereditary* ; a fourth consi-

ders it as *transitive*; and, in a fifth, it is thought to be of a *critical* tendency.

Now such leading features, as “specific ‘matter,’” as “constitutional action,” as “*transitive, hereditary, and critical natures,*” cannot be admitted (particularly the two first) without general and determined *evidence*; and that, I apprehend, would appear to be wholly wanting in the instance of this disease.

In attempting therefore an inquiry into the nature and action of cancer, it should seem essentially necessary to go over some of the principal cases which have been adduced to support such opinions; and endeavour, in the first place, to go as far as we can towards showing what the disease *is*, by proving what it *is not*.

OF CANCER, VIEWED AS A DISEASE ARISING
FROM A SPECIFIC VIRUS, AND HAVING A
CONSTITUTIONAL ACTION.

So very loosely has the character of cancer been attended to, that the few instances which have been brought to establish the position of its matter being specific, or the disease itself as constitutional, not only fall short in proof, but they may even be turned against the very opinions they are brought to support.

The evidence they give may be taken under two considerations: first, the ulcers which were said to have arisen from the matter of cancer, were evidently *not* cancerous; nor do any of the cases, where *constitutional* affection is ascribed, stand on better ground.

Such evidence, therefore, invalidates itself, by showing that, from the imperfect state of the knowledge of this disease, and from the generally received opinion, that it arose from a specific virus, sufficient discrimination has not been made between it and other ulcer-

tions ; and thus appearances, arising from some constitutional taint, or from some local action, bearing the cancerous character, have been confounded, or mistaken for cancer : and, secondly, the very few instances brought to prove the question, show, by analogical inference, that the matter of cancer is not specific ; since, if it were, it would have the evidence of determined general effect, and not rest upon solitary and equivocal cases.

However imperfect analogical reasonings may be, from the varieties of morbid actions, still a distinct outline is always presented by those actions that depend on a specific virus, and from which, most assuredly, we may draw a fair conclusion, whether a disease ought to be classed under such an order or not ; that is, there is an undoubted specific similitude in all such diseases to one another, with regard to the mode by which each of them pursues its different course ; it is, in fact, such similitude that constitutes the specific character.

In variolous matter, for example, we do not see a *determined specific* action produced

one day, and the same matter acting *equivocally* on another day, so that one shall be at a loss to determine whether it is small-pox or not : the same with regard to *vaccina*; though in itself, and in its effects, considerably more delicate than *variola*, still it observes, most strictly, its own peculiar character. Even when the two matters are blended together in the same inoculation, no modification is admitted ; the disease is still simple; no new compound arises: whatever appears, comes from one original source, and observes, most distinctly, in all its stages, the specific character of the virus that produced it.

The same holds good with all other actions arising from specific virus.

If exceptions are observed, the variance is always produced by some supervening disease, or from some peculiarity in the system, altering the *course*, or the degree, but not the *nature* of the specific action.

The cancerous character, so far, certainly cannot be measured by this scale.

Some idiopathic symptom would appear always necessary to a specific disease ; now

there is not one, peculiar to the action alone, to be found in all the cancerous tribe. The puckered, serrated edge, the loose fungated overlappings, the deep excavations attendant on cancer, are all individually to be found in every species of sore that differs from the simple purulent ulcer.

Nor indeed are all these appearances together, in the same sore, sufficient to constitute the cancerous character; because such appearances have existed precisely the same (so precisely indeed as to have passed for cancers) where a known specific taint of the constitution has been evinced, and where cancer has never finally resulted.

In support of this, the evidence of the following cases is given :

CASE 1.*

HANNAH ——— was admitted, about nine years ago, into the *cancer* ward of the

* This case struck me so forcibly, that I took very accurate notes upon it at the time, which I very much regret having lost.

Middlesex hospital, as a patient of the late Mr. Daniel Minors, for a cancerous under-lip ; the sore had the common appearance of such affections ; the edges were puckered, the lip turned out, and, over the greater part of the surface of the sore, a firm serrated fungus was produced. In this case the little red onion was applied, by way of poultice, to the part, and the cicuta given internally : these means, however, though persisted in for some time, seemed wholly inefficient ; the sore kept spreading ; it had destroyed half the substance of the lip, and was seen to make particular ravage on the inside, and to affect the gums. About this stage of the complaint, from the general appearance of the woman's countenance, and, I believe, from some suspicious eruptions about the forehead, she was questioned concerning her previous mode of life, and confessed having, some time before, laboured under a severe venereal affection. Upon this authority, a course of Plummer's pill was prescribed, and upon the third or fourth day there was evi-

dently a change for the better in the whole appearance of the sore *. The Plummer's pill was continued until a small degree of salivation was produced ; this was gently kept up ; the sore gradually healed, and she was sent out perfectly cured. I asked this woman to call at the hospital some months after, to see how she was going on ; her health had remained very good, and the lip itself had got to a more natural state.

CASE II.

A WOMAN was admitted into the same ward, with a diseased rectum, attended with an ulceration on one side of the sphincter, of a cancerous appearance.

Some time after, she complained to me one morning of a pain at the back of her left hand, which was so great at night as to disturb her rest : upon passing the finger over it, an evident thickening of the periosteum

* I well remember Mr. Minors's peculiar smile and manner on this occasion.

was perceptible, and the part itself was very sensible to the touch.

As she was a married woman, although this circumstance carried with it suspicion; nothing more was done for a few nights than giving an opiate: the pain, however, increasing, with a visible increased thickening and inequality of the periosteum, so as to present a complete node like appearance, mercurial friction was ordered, small doses of calomel were given internally, and the ulcer of the rectum washed with a specific lotion. The result of this treatment was, that the ulcer healed, the node disappeared, and she was shortly afterwards discharged.

We know that "all stimuli produce action in proportion to their irritating powers*."

Now, whether the action of specific mat-

* Crichton.

ter, in general, depends on an irritating power, producing an excitement in the vessels of a part to a *peculiar action*; or whether the effect of such matter is to be considered in a double light, as possessing both an irritating and a chemical principle; the one acting on the fibre, and the other on the fluids, producing a new arrangement of combination; the specific disease (that of cancer) does not appear to act on the one nor the other of these principles.

If the matter of cancer were specific, since it is described as highly irritating and corrosive, how does the system escape untainted by such a virus, when the breast (for example) has been the seat of cancer *for years*, and the axillary glands largely diseased? Yet there never was a constitutional affection, nor ever a case of specific ulceration, from the absorption of cancerous matter*.

From the matter being absorbed, or ap-

* See Dr. Nesbit's Case, in chap. iv.

plied to an immediate surface, ulceration may have been produced ; but if this is to be brought forward, as evidence of *specific quality*, the matter of any common ulcer, upon the same ground, must also be considered *specific* in its turn, since inflammation and ulceration are frequently the consequences of such absorption and application.

So much, at present, for analogical deductions. A regular series of experiments, no doubt, would be far more desirable, to set the question at rest ; but when these are wanting, and likely to be so, it should seem better surely to draw the most practical conclusions we can from what we know, than to seek objections by fanciful conjectures, or indolently to wait the chance of the question explaining itself.

We shall now, however, proceed to the statement of some of the *facts* that have been adduced for evidence of the specific quality of cancerous matter, and of the constitutional nature of the disease.

CHAPTER II.

OF FACTS WHICH HAVE BEEN SUPPOSED TO PROVE THE SPECIFIC QUALITY OF CANCEROUS MATTER, AND THE CONSTITUTIONAL NATURE OF THE DISEASE.

NOTHING appears to have been thought too foreign to be confirmed into a relative fact, illustrative of the nature of this disease. Tulpius records, that after being exposed to the "halitus" of a cancerous sore, he was seized with a remarkable depression of strength, attended with ulceration of the throat, to such an extent, that the sloughs were obliged to be removed by forceps:—a tolerably strong example of the credulous notions that have been formed relative to this disease; as if "depression of strength," and "ulceration of the throat," were circumstances sufficient to attach the necessity of a

peculiar infectious quality to its character. Might not Tulpius have an "ulcerated "throat," although he was attending a cancerous sore? Did the ulcers of the throat prove to be cancerous? No. Where is the proof that it was the "cancerous halitus" that produced the "remarkable depression of "strength?"

I believe the explanation to be this: that Tulpius, alarmed at the state of his throat, attributed, in the hurry of the moment, an effect to a cancerous cause, which more probably originated in a severe cold: but, however, admitting all that he suffered to have arisen from the cancerous exhalation, it proves nothing with regard to the question of specific infection. The exposure to a putrid dead body might have produced precisely the same effects.

The case of Mr. Smith, one of the surgeons of St. Thomas's hospital, which made considerable noise at the time, appears to have been just as little to the purpose as that of Tulpius. No rational conclusion whatever was drawn from it; it was, accommodat-

ingly, left to be applied as fancy might suggest.

The following are the facts, as they appear in the statement:

Mr. Smith had the curiosity to taste a drop of cancerous matter, and from that hour he was tormented with a horrid taste in his mouth, which defied all means of relief; he languished some few months after the experiment, and was supposed to have died from its consequences.

In itself, this certainly was a deep tragedy; but as a case to prove specific property in cancerous matter, it becomes truly farcical.

The recorders of this case do not say what they mean should be inferred from it; they seem to rest contented in having raised a supposed difficulty.

If eye-witnesses, with all the facts about them, neglected to draw the proper conclusions, I do not see why any comer-after should make out the case for them. The thing, however, though certainly no evidence in the present question, is in itself very curious, considered as one of the infinite va-

rieties of mental imposition and derangement. The spirit of inquiry had urged Mr. Smith to a dangerous experiment ; he found that he could not be certain that the effects would not be injurious, or even fatal ; his reason could not approve what he had done, nor sustain the impression of danger. A train of fanciful ideas came into being ; the man's mind, rather than his body, was infected.

Where was the evidence of specific infection either before or after death ? Did the tongue become cancerous ? Was the stomach found to be in a scirrhouss state ? Was the pylorus, the œsophagus, or were the tonsils, so ? or was there any thing that proved a taint of the system ? No.

If such evidence therefore be wholly wanting, the fact, with regard to the "bad taste," is no more in point, than if Mr. Smith, after having tasted the cancerous matter, had fancied himself a tea-pot or a pipkin.

Another point of view in which this case may be considered, (if a highly stimulating

and nauseous quality is allowed to cancerous matter) is that of its being an instance of the perversion of the sense of taste, from a violent impression upon the nerves of the tongue, accountable (perhaps) in the same way as those diseased perceptions which arise in the same and other organs of sense from violent impressions on the brain, or from the abstraction of natural stimuli in that organ.

The supposition, however, of "bad taste," is not supported by the concurrence of those unfortunate people who labour under the disease of cancer in the mouth.

A case is mentioned by Mr. Gooch, where ulcers were produced by the matter of cancer, from which it was supposed the constitution received a cancerous taint. This case is also noticed in the "Practical Observations on Cancerous Complaints," by Mr. Pearson ; but the opinions that were drawn upon it, are so successfully answered by that gentleman, that I beg leave to quote the statement, and his conclusions.

"A child, three years old, drank a little of the liquor which had washed an ulcerated cancer upon the breast; about a fortnight after, an eating ulcer seized the tongue and one side of the mouth, making dismal ravage of the cheek on the outside as well as the inside. This sore was cured, with much difficulty, by a surgeon in London. More than twenty years after, the leaven showed itself upon her thigh, where she had received a contusion by a fall some years before; and an abscess was now forming near the bone, towards the articulation of the hip, which was also cured with the utmost difficulty. Fifteen years after this, she first discovered a small scirrrous knot in her breast, indolent and moveable; in a few years it possessed the whole breast, and at last the glands of the axilla: the tumor remained in an occult state as long as she lived."

To this Mr. Pearson adds, "It may be proper to remark on the preceding narrative, that Mr. Gooch was not an eye-witness of the several circumstances recorded in it, but

received the account from the lady herself, when she was about sixty years of age. The lady was too young, at the time the accident happened, to make any accurate observations ; she must consequently have received the story from her relations ; and what degree of probability there is, that she would be qualified, after so long a period, to relate minutely the history of a disease which she first obtained by oral communication, I would leave to the judicious reader to determine.

" The abscess which began to form at the hip joint, more than twenty years after the ulcer of her cheek had been healed, can certainly prove nothing to the purpose ; any person may have a suppuration in a joint, after suffering a contusion, without the presence of a ' cancerous leaven ' in the constitution. At about forty years of age, she found ' a small scirrhouss knot in her breast, which increased considerably after the cessation of the menstrual discharge.' At this period of life, all writers agree, that women

are more subject to be attacked by cancerous complaints; and the case occurs so frequently, that we have no need to have recourse to the slow and secret action of a supposed ‘cancerous leaven’ for an explanation.”

In addition to the above remarks, this case may be questioned, if not wholly rejected, as cancerous, on other grounds. The abscess produced some time after the contusion on the hip, would seem strongly to support the opinion that all the appearances from the beginning, rested upon a scrophulous habit*; and, indeed, this opinion is still more strengthened, when it is recollect ed, how familiar it was, some time back, to blend the two actions, by supposing cancer to be a modification of scrophula.

* From the description of the breast, it certainly appears to have been a scrophulous enlargement; and the ulcers that took place at the age of three years, were most likely a species of nomæ, that sometimes attack the cheeks of girls.

I cannot better establish the position I set out with, "that, from the imperfect state of the knowledge of the cancerous disease, and from the confused opinions about it, other ulcerations have been mistaken for or confounded with it," than by quoting the very words of Dr. Hamilton, in his "Observations on Scrophulous Affections; with Remarks on Scirrhus, Cancers, &c."

" From the foregoing remarks, it seems to appear (says the Doctor) that scirrhous and cancer are consequences of a scrophulous habit. It has already been observed, that scirrhous frequently happens to a strumous gland, and that it seems to be the other of its terminations when the gland does neither dissolve and discuss, nor suppurate, and that cancer is known to succeed scirrhous; therefore those morbid states of the lymphatic glandular system, from those circumstances, seem to be only varieties in gradation from one to the other, in particular constitutions of some scrophulous subjects, although they appear to take on, in succession, new forms,

and have different conclusions. I am the more induced to believe this, because I never knew either a scirrhous or a cancer take place but in a scrophulous habit."

Avoiding the question entirely, whether a cancerous action may not follow a scrophulous affection, I would only ask, Can it be for a moment doubted (after reading the above opinions) that a *scrophulous* sore, under peculiar circumstances of aggravation, assuming a phagedænic appearance, might not be mistaken, by a person holding Dr. Hamilton's mode of reasoning, for a *cancerous* ulceration? or, upon the same evidence, I would ask, whether, supposing a cancer to exist in a scrophulous habit, and scrophulous symptoms to be actually thrown out, such symptoms, though really scrophulous, would not be brought in evidence of a cancerous taint, by any one under similar circumstances of persuasion?

It may be observed, in answer to the above opinions of Dr. Hamilton, that cancer is a disease peculiarly attached to that system of

glands which carry on the various secretions of the body ; and that the disease is so uncommon to the lymphatic system, that it is doubted whether a primary cancerous affection of a lymphatic gland can ever take place : so that, as far as general observation goes, the cancerous disease would appear excluded from the lymphatic system, whilst scrophula, on the contrary, seems exclusively attached to it *.

The notion therefore of the two diseases being modifications of one another, must be wholly erroneous, although a secreting gland in a scrophulous constitution may be more open to the cancerous influence, simply upon the ground that the energies of life, in all such instances, are considerably more deficient, and that all complicated parts must therefore be more open to derangement.

* A lymphatic gland, perhaps, is that kind of simple body which admits of no mediate morbid alteration between direct excitement, and the specific debility evinced in scrophulous action.

In support, however, of his opinions, Dr. Hamilton has favoured us with a case as evidence of a general cancerous taint.

" About twelve years ago, a gentlewoman, of thirty-four years of age, of a thin and very scrophulous habit, who had been married many years, and never had been pregnant, whose periodical discharge of catamenia was very scanty, and of a short duration, and who, in the intervals between the periods, was distressed with leucorrhœa, asked my advice respecting a small knot, of about the size of a pea, situated immediately under the skin, at a little distance from the edge of the right mamma, towards the axilla. The glands of the breast were meagre and flat, very little fat was in the cells of the adipose membrane, and not a single obstructed gland was to be felt any where near it; a few indeed (a very small degree enlarged) were on each side of the neck, a little below the ears. As it gave her no uneasiness, nothing further was directed, but to avoid compression and irrita-

tion of every kind, and to pay some attention to her diet.

"I did not see her afterwards for several months, and then found that the knot had increased considerably in magnitude, and alarmed her. It went on increasing gradually, and at the end of twelve months from my first seeing it, it had become as large as a hen's egg, but of a different shape, and had taken on a livid cancerous aspect, attended with great pain: it was therefore determined, in consultation, to have it removed by the knife; which was accordingly done.

"Upon cutting it asunder, afterwards, to examine its texture, it was found to consist of several coats, with a fluid between them, and adhering to each other in different parts, the external part of which was of a callous hardness, more than one-eighth of an inch in thickness: the rest were neither so thick, nor so hard, as this; and within the innermost, there was near an ounce of a lymphatic liquor.

" The wound healed, without trouble, in a short time.

" In about three years afterwards this lady was alarmed by the appearance of another glandular knot, similar to the former, at the upper margin of the scar; this likewise advanced gradually, became much larger than the former, and more alarming, in the space of a year. This tumor was also extirpated, and the wound healed without much trouble; but in a little more than a year after it healed, the mamma itself became largely diseased, and adhered to the parts beneath it. The chain of glands from it to the axilla became enlarged; the breast now became a cancer ulcerated, and discharged a corrosive ichor; the ulceration spread, and not only infected the other breast, but all the absorbent glands in the body, with this cancerous disposition, and destroyed her in about three years after the ulceration of the breast took place.

" I saw her about a month before she died, and think there could not be a more

distressing object ; she was in constant torture ; a scruple of opium, once in twelve or fourteen hours, hardly afforded a small truce to her sufferings. Her head was motionless, from a concatenation of large diseased glands on each side of her neck, from the head to the clavicles, breasts and axilla ; the tone of her voice was changed ; she spoke with difficulty, and could scarcely swallow ; which last affection appeared to arise from large and indurated tonsils, and the pressure of the tumid glands of the neck upon the trachea and œsophagus ; the abdomen was turgid, and groups of diseased glands appeared in the inguina ; and there cannot remain a doubt but the mesenteric and all the internal absorbent glands were equally affected, and particularly those in the vicinity of the rectum, as she had much difficulty in voiding her fæces."

Here is a case of cancer of the breast occurring in a scrophulous habit ; and although the patient was literally eaten up by this constitutional disease for years, yet the

moment the cancerous tumor is established in the breast, we have all the *scrophulous appearances* changed into a *cancerous taint*.

No doubt the cancerous tumor and ulceration became a violent irritation to the absorbent glands, previously so deeply diseased ; and, in this point of view, the cancer may be considered as a new cause of aggravation to extend the scrophulous ravage to so horrid a degree ; and also by adding to the general debility of the constitution.

But nothing more is wanting than the conclusions which are drawn from this case, to show how the two diseases have been confounded with one another. The whole lymphatic system was attacked with scrophula, as well out of the course of absorption from the cancerous breast, as those glands that were situated immediately in it. What had the inguinal glands to do with the ulcer of the breast ?—Nothing. They were out of the course of absorption ; and, undoubtedly, as far as they had to do with the cancer, would have

remained perfectly healthy, had it not been for the scrophulous disposition.

The large quantity of fluid found in the former tumor in particular; and, indeed, the appearances altogether, so unlike scirrhouſe formations in general, afford a curious evidence with respect to scrophulous influence over cancerous accumulations; which will be further noticed when the inquiry into the nature and action of cancer itself is attempted.

CHAPTER III.

OF STRUMOUS GLANDS; AND FURTHER EVIDENCE AGAINST THE SPECIFIC VIRUS OF CANCER.

MANY cases of strumous glands have occurred, which, in the first instance, have been mistaken for scirrhi in the breast: such tumors, however, after arriving at a certain point, have burst, discharging a sanious fluid, with sloughing of the capsules, and condensed cellular substance; and then have granulated and healed. In all such cases a scrophulous disposition has been more or less evident.

I have just had a case precisely answering this description ; and which, in the hands of Dr. Hamilton, (or any one holding the persuasion of cancer being a modification of scrophula,) no doubt would have been men-

tioned as an instance of a cancerous disposition being evinced after an extirpation of a scirrhus.

The case alluded to is that of a confidential attendant on a lady of distinction, who, twenty years ago, had a scirrhus of the left breast extirpated; at which operation the late Mr. Pott attended. In the course of last summer, she observed a tumor on the left side of the neck, near the clavicle, and on and between the two origins of the mastoideus.

She was directed by a surgeon in the country to embrocate it with the camphor liniment. Upon her return to Town, when I saw it, it had increased to the size of a large pigeon's egg in diameter, but longer, and more unequal in shape. She complained of a great deal of pain, and particularly upon turning her head. The acetated ammoniac-embrocations were ordered to be applied on linen rag, and some slight alterative, with cicuta, was given her. In a short time there was an evident separation at one end, and

what appeared to be an absorbent gland could be felt distinctly from the rest of the tumor. Although this gradually diminished, the rest of the tumor evidently increased : a poppy fomentation was now used, in conjunction with the embrocation. The diseased part still increasing, and the skin getting extremely irritable, the intention of discussion was given up, and poultices were applied : an attempt, however, at suppuration was as fruitless as that of absorption ; the skin ulcerated at the projecting part of the tumor, and an ichorous fluid was discharged ; the ulceration increased, attended by sloughing of diseased adipose ; it produced an exquisitely painful sore, attended with considerable discolouration of the surrounding skin, which was also studded with little ulcerations. In this manner it proceeded until the diseased glands had wholly sloughed ; granulations then appeared ; and the whole, though with a very ill grace, at length completely skinned over.

With regard to the supposed specific qua-

lity of cancerous virus, the general outline of the evidence in support of that question has already been noticed.

Another case, however, is mentioned by Mr. Gooch, where ulcers of the mouth were produced by using a pipe that had been in contact with a cancerous sore. These ulcers, it appears, were cured by a *direct exhibition of mercury*. To detail the particulars would only be a repetition of evidence given by Mr. Gooch in the preceding case, which has been fully commented on: we shall content ourselves, therefore, by generally remarking, that all the sores which have been ascribed to the cancerous virus have been cured; and many, even by means directly opposite to the known nature of that disease. In the sores last mentioned by Mr. Gooch, *mercury* was applied *externally*, and given *internally*.

Such evidence, applied to this question, is wholly contradictory to the laws of specific agency. We have undoubtedly evidence enough to prove that ulceration has been

produced by cancerous matter ; but it is also as clearly evident that such ulceration was not specific, but might equally have arisen from any common irritation.

In further corroboration, I beg to quote the following statement, by a Doctor Nesbit :

" I have freely handled sores in every stage of the malady without the least attention to cleanliness, yet no tendency to infection ever appeared ; pimples have even occasionally arisen on those parts of my hands that had touched the sores, but they displayed nothing more malignant than those that arise from simple acrimony, and departed as readily. On one occasion suppuration of one of my fingers took place, yet no specific symptom attended it different from common ulceration ; on another, along with suppuration, a swelling of the axillary glands likewise occurred ; so that on this point I can certainly speak with a good deal of decision. Nay, by accident, I was once so unfortunate as to taste the matter from a cancerous sore ; it possessed a peculiar mawkish taste,

but no bad consequences arose in that part of the tongue which had received it."

We have here as strongly marked evidence as possibly can be. I would ask, What would be wanting more, supposing for a moment that either of the sores had proved truly cancerous, than such a case to establish the specific quality of the virus? And, on the other hand, as the sores *were not cancerous*, what more could be wanting to prove that the disease of cancer does not rest upon a specific virus? Here no indirect proof can attach. If Dr. Nesbit had been inoculated five hundred times with cancerous matter, it would have proved nothing unless *an action had taken place*. If no action had resulted from such inoculation, it might have been said, and fairly too, that Dr. Nesbit probably possessed a peculiar insusceptibility towards the action of cancerous virus: but as the action *did commence*, and proceeded to *an end*, and, after all, showed nothing more than *common irritation*, and *common suppuration*, it cannot possibly be inferred that

Dr. N. possessed a *peculiar power* of converting the action of *cancerous virus* into SIMPLE SUPPURATION: therefore these instances prove just as much as the question requires: a thousand could prove no more*.

* I should have been happy to have given Dr. Nesbit's own opinion on this very satisfactory and important statement, had there been any thing like an opinion in his treatise.

CHAPTER IV.

OF TRANSITIVE, CRITICAL, AND HEREDITARY NATURES, IN CANCER.

WHATEVER practical deficiency there may be with regard to the disease of cancer, *imagination* has been by no means idle in filling up the measure of information. In truth, if one were to believe what has been written and said of it, cancer is one of the most absurd diseases in the whole catalogue of human miseries ; combining natures the most opposite and contradictory. In one author, it is slow, sullen, and obscure ; in another, quick, lively, and direct ; in a third, we find ages passing before its secret workings become visible ; and in a fourth, its operations are as sudden as thought.

In the history of cancer, therefore, (except in a few instances,) we find a great deal

of the various propensities of its authors, but very little on the real nature of the disease ; each has kindly contributed some notion, and, as there was no path to pursue, has wandered wherever his fancy led.

On such grounds the opinion of the transitive nature of cancer would seem to have been established ; for, certainly, there is no direct evidence to support it, though it has not been the less tenaciously asserted and insisted on.

A case of supposed cancer is related by Richard Wiseman, of "a lady, aged fifty years, of a scorbutical and very ill habit of body, who had a painful gland in her left breast. By means of leeches, and other applications, the pain was eased ; and, of late years, it lessened and resolved." He then states, that, "some while after, she complained of a pain in the back, and made bloody water :" for this, we find, she was sent to Tunbridge, and afterwards enjoyed a tolerable state of health. To this statement Mr. Wiseman adds, "I suppose the

disorder of her kidneys is a translation of some of those sharp humors which affected her breast."

In this case, the tumor mentioned is not satisfactorily proved to be scirrhoue. Women at the age of fifty are particularly affected by glandular obstructions, and especially with deranged urinary secretions.

Is there no better way to account for a scorbutic old woman's making foul water, although she may have had a lump in her breast, than by roundly supposing a direct translation of local humors?

At the age of fifty, in women, a very important change has recently been effected; even then the constitution is probably struggling with the novelty; things would seem, as it were, not finally adjusted. Some action may still be wanting; and in these struggles of nature to resume her wonted functions, may not the vessels of the kidneys take on an imitative process, to answer in some degree the recent uterine suppression?

The evidence, however, brought in sup-

port of the question is the best possible answer that can be given against it ; I shall therefore beg to quote what is said by a modern author, who has endeavoured to establish the transitive nature of cancer, and then employs it as an illustration of its constitutional character.

Dr. Nesbit says, “*Every practitioner accustomed to attendance on this disease, must recollect facts which tend to show that it possesses, at times, something of a transitive nature : thus, in a cancerous breast, I have frequently known the pain entirely depart, and affect some of the larger joints, &c.**” The author then simply adverts to some of the cases of the earlier writers, one of which has just been noticed. He then states, that “ Dr. Fothergill was the first modern author who, in his paper on obstinate pains in the face, has pointed out this transitive connexion ; and that Bertrandi had also made

* Query.—Were these pains cancerous or *rheumatic* ?

some observations on the same point." Dr. Nesbit then draws this feeble conclusion : " these facts we would adduce, if true, as a strong proof of the constitutional nature of this malady."

The whole argument is thus left floating. Indeed the author would seem to doubt even the *truth* of the facts he brings forward, when he says, "we would adduce them, IF TRUE:" and yet, without inquiring whether they are applicable or not, he gives them in support of his favourite opinion, "*as a strong proof*" of the constitutional nature of the malady !

This writer's remarks on the *critical* nature of cancer are as curious. " Many authors, (he says) on the other hand, have wished to consider scirrhus as of a critical nature ; and the symptoms which precede it, in many constitutions, give strong grounds for this opinion. Though we would by no means wish to go this length, yet we are perfectly clear that it is not to be removed by simple applications to the part, or even at an early period, before those constitutional changes,

with which it is for the most part connected, are established." Still pursuing his favourite notion, "constitutional nature," the author gives his support to the opinion of scirrhous being, at times, of a critical nature, when he says, "and the symptoms which precede it, in many constitutions, give strong grounds for this opinion :" yet, at the same moment, as if he repented of the rashness of *so strong* an assertion, the Doctor returns to his sober policy, and adds, "though we would by no means wish to go this length!"

It is certainly very lamentable that the subject has not been treated with more decision. A determined opinion, though founded on error, must ever be of less evil tendency than that which is incessantly dangling between two points. The former is a steady object, which may fairly be worked upon, and which, in time, may give rise to a just conclusion ; but the latter is a wavering tantalizing uncertainty, that, without gratifying, leaves the mind dissatisfied and embarrassed.

The last nature that has been attached to the disease of cancer is an hereditary one, and this generally would appear to have been modified down into predisposition.

How this quality came to be admitted into the cancerous catalogue, I am not aware. If it really existed, it would be as directly supported, by a regular descent from generation to generation in the instance of this disease, as in that of the gout, or any other hereditary disease ; but when the *specific* quality of the matter of a disease is admitted, together with “a constitutional nature,” it is not to be wondered that an hereditary quality should be also added.

In short, the question only goes to prove how little dependence can be ventured on any of the evidence that has been adduced for it ; since the disease (except in some rare instances, as in the able observations by Mr. Pearson,) has been wholly denied the advantages of investigation, with regard to its own nature, on the one hand ; and of discrimination, with respect to appearances arising

from totally different causes and actions, on the other.

Predisposition, in itself, is so indeterminate a thing, if placed to show any peculiarity in a disease, since every constitution and every part are evidently predisposed more at one time than at another to take on diseased actions, that the merits of "predisposition" will be, for the present, waved; and especially as the disease itself is *at present* considered as unexplained.

The leading evidences in favour of the various natures ascribed to cancer having now been noticed, the inquiry will be further attempted under the head of The Theory of Cancer.

CHAPTER V.

THE THEORY OF CANCER.

SECTION L.

MORBID alterations can only be appreciated by natural actions; and the same laws that govern health, dictate the limits of disease.

I therefore infer that the essence of organic life is immutable; that is, that there are points equally to be observed by diseased as well as by healthy actions; and that, however modified, the living principle must limit every process.

Morbid and natural structures having then the same principle necessary to each, and governing both, the disease of cancer, denied to rest upon a specific virus, will now be considered on the grounds I have endeav-

voured to establish, viz. that a morbid alteration should never be viewed independently of the natural organization and functions of the part, or as beyond the limits of the laws of life.

I thought it the more necessary to make these few general remarks, because they at once exclude the erroneous mode of reasoning adopted in the alkaline hypothesis; which attributes the foundation and progress of the cancerous disease to the presence of a “powerful volatile alkali” in the system; to the presence of a thing that cannot come into being but by a putrefactive fermentation; which, of course, cannot take place as long as the living principle remains.

Thus the chemical examination of *dead* animal matter can never account for *living derangements*; because, in the first place, such analysis can only furnish us with the *elements*, which, by chemical law, cannot elucidate the nature or qualities of the *compound*; and since, on the other hand, such examinations entirely exclude, and are wholly

incompetent to explain, the system upon which the phænomena of life depend.

The subjecting any particular muscle, for example, to the analysis of heat, or to a putrefactive fermentation, can prove nothing with regard to its nature or diseases; because the only similar process that can possibly take place, while the system obeys the laws of life, is that of gangrene in a part; and which is indeed the putrefactive fermentation possessing the part, after its living principle has been destroyed.

Much stress has been laid upon the circumstance of *ammonia* being detected in cancerous matter, a quality wholly wanting in true pus: but, after all that has been said about it, and after all the experiments that have been made upon it, nothing more is proved, with respect to the question, than that the *cancerous sore* is not a *simple purulent ulcer*. For, with regard to the ammonia, the discharge of any gangrenous sore will furnish the same; or, in fact, it will be found in any state where a putrefactive pro-

cess of the animal solids is going on ; so that it is impossible to build up any thing like a theory upon the *discharge* of cancer alone, since the qualities that have been found in the matter of a cancerous sore, simply show that there is often a putrefactive breaking down of the animal fibre, from which the discharge becomes impregnated, and by which, probably, in many instances it is partly made up.

All the opinions, therefore, of a “vitiated state of the humours” being *necessary* for the generation of a cancerous poison, must fall to the ground, since these opinions have been taken up on the qualities of the discharge *alone*, without any other concurring theory and facts.

SECTION II.

FINDING then such conclusions defective, one is led to a closer examination of the circumstances that attend the origin of cancer ;

and it will be found that this disease, to which so many horrid qualities are ascribed, and so many depravities would seem necessary, can exist not only in the most healthy state of the system, but its foundation may be laid accidentally even in a part perfectly sound. I would ask, Where is the disposition to produce “hepatized ammonia*” to be found, when the origin of a cancer is laid in the breast of a girl of sixteen, by a blow? Can it be supposed that a *specific* poison passed in, at the time, like an electric shock? How defective then are all the reasonings on morbid alterations, where attention is not paid to the *natural* structure and functions of the parts; and where that is resorted to as a *cause*, which, in reality, is *only* an accidental *consequence* of the disease!

It is only by a strict analytical attention to the morbid *origin* and *progress*, that the nature and appearances of cancer can be rationally deduced and accounted for. If

* See Crawford and others.

any one, for instance, were to reason upon the appearances of an aneurism of the aorta, in its last stage, how different would his conclusions be from truth ! Would the absorption of the bones of the sternum, or the immense terrific tumor that protrudes ; or could the examination of the discharge from the little sloughing sores scattered upon its surface, afford the least light with regard to the *first giving* of the arterial coat (the cause and origin of such dreadful consequences) ? Nor can loose observations on cancerous matter, or cancerous appearances, afford more satisfactory conclusions. The subject should, if possible, be taken up from the first moment of that obstruction in which it originates, and followed regularly, through all its gradations, to that crisis when it presents those complications which, without such previous vigilance of observation, are inexplicable.

When one comes to reflect attentively on the structure and functions of the parts most liable to cancer, no small degree of light is thrown upon the history of this disease. In

the female breast we find a circle of *active* systems, surrounded and imbedded by an *inactive* mass: the breasts consisting of a congeries of glands and their lactiferous tubuli, surrounded and connected with a quantity of adipose and cellular membrane; the first possessing, ~~in common~~, with other secreting organs, the principle of life in a high degree, and also ~~having~~ ¹⁸⁹⁶ the peculiarities attendant on *irregular secretions*; whilst the latter (the adipose and cellular membrane) is in itself passive, and has the principle of life but sparingly distributed.

Let us then suppose an injury sustained in such a part, not sufficient to stimulate *the common* mass into action, (so that inflammation and abscess might be the consequence,) yet so far effectual as to rouse one of these *little susceptible glands*:—Nineteen in twenty, perhaps, of such instances might happen without any ill consequences; or, at the worst, might proceed to a certain point, and then be resolved by absorption: yet a twentieth might become so entangled, that a *per-*

*m*anent obstruction of one or two of these glands might follow; and here the mischief would commence. Though the œconomy of the general mass would not be deranged by such partial injury, yet still the obstructed gland must, in such a circumstance, be considered as a system in itself, endeavouring to regain its equilibrium ; and to such struggles may be attributed the progress of the disease, by new actions being acquired *.

* ON ACQUIRED ACTIONS.

Whenever there is an inability in the system to restore an injured part to its original form by the ordinary action, we constantly find some new action assumed :—Nature would seem, as it were, to try her *next* best. Thus, in many cases of fractures, where there is great debility or old age, cartilaginous or tendinous mediums supply the place of bony unien. An injured or weakened coat of an artery is often attempted to be strengthened by a bony lamina or patch ; and, in scirrhouſe formations or changes, a marked and very extraordinary attempt is frequently evinced to correct the deranged state of things, by reducing the whole into one insensible and homogeneous mass : and here, at the same time, is afforded the most

Thus it would proceed till its accumulation became a cause of irritation to the contiguous parts. Here a new field of action would take place. From such irritation the neighbouring glands would at length be driven into a similar complication of acquired actions, whilst the connecting cellular and adipose would undergo a more simple alteration of their structure by inflammatory obliteration and condensation. Things

direct evidence of the disease of cancer arising and depending on simple altered organization only. The very source and supply of the disease is an assimilation of various and unequal structures, giving rise to dissimilar actions. What then could Nature do better (when all her attempts have failed to restore an equilibrium of parts) than what she very often effects, viz. reducing the whole into a bony mass? Here all discordancy of action is at once destroyed, and an attempt at natural cure in scirrhus is clearly evinced, which shuts out the idea of a "specific virus." This attempt at natural cure is frequently exemplified in the examinations of true scirrhi, a progressive change into bone being often evident; in many the centres are completely ossified. Such attempts

would thus go on, till the *internal pressure* became a *cause of irritation* to the *external covering*; and then an effort would be made, by the bursting of the integuments, to dislodge the whole offending mass.

And here, undoubtedly, a *natural cure* would be effected, if the *diseased mass* were under the circumstances of *common exfoliation*: but the living principle not being destroyed in the mass, as in *exfoliating bone*,

have been still more successfully accomplished in the ovaria, these parts having often been found wholly converted into bone by the cancerous action. (See Baillie's "Morbid Anatomy.")

Confused, therefore, as the cancerous mass may appear, yet more of arrangement would seem to exist than one might at first be aware of. Such would appear to be evinced with respect to the membranous intersections, or *septa*, most commonly observed in *scirrhi*; as particularly noticed by Dr. Baillie.

Query:—In the view of natural cure, may not these *septa* serve as a surface of extension for bony actions, similar to what we see in the formation of the bones of the head?

a separation could not be effected ; and the various disjointed actions, now brought to the surface, would still pursue their course, presenting all the deformities of a cancerous sore.

CHAPTER VI.

OF THE PARTS MORE ESPECIALLY OPEN TO CANCER.—OF THE PERIODS FAVOURING ITS ATTACKS.—THE QUESTION OF PREDISPOSITION IN CANCER CONSIDERED.—FURTHER INQUIRIES INTO ITS ACTION;—AND OF THE INFLUENCE OF SCROPHULA OVER CANCEROUS FORMATIONS.

THE preceding chapter may be considered as the first step in my attempt to show that simple obstruction may lay the foundation of a cancer; and it must be remarked, that every circumstance attendant on this disease, supports the mode of its progress, which I have attempted to explain.

From being the most complicated parts, the breasts of women stand first on the list, as the most open to this disease; and this too is most markedly shown, by cancers occurring

in these parts at times when such structure is most exposed to the hazard of derangement; as, for instance, at the time of the menstrual suppression; or at more advanced ages, when the general energy of the constitution is not equal to maintain the due equilibrium, or when such parts are probably suffering in themselves a change of arrangement, and are falling back into simple or obliterated organization, that part of the œconomy being laid aside in which their functions were required.

The same line of evidence is given, and as strongly enforced, with regard to the nature, functions, and structure of the uterus. This part, which stands next in rank to the breasts of women, as more open to attacks of cancer, is also particularly circumstanced with respect to unequal and complicated functions. Exposed to the most formidable transitions in gestation, it is liable to almost every species of injury.

The evidence is also as strongly marked with respect to the *periods of attack* inducing

obstruction, as it is ample with regard to complication, in function and structure; cancers of the uterus rarely or ever occurring before that organ has sustained a very material revolution from the suppression of the menses; or, if before that period, always resulting from some premature similar cause.

The same line of evidence is likewise prolonged in all the parts, and in all the circumstances attending them, which are enumerated as more particularly liable to this disease, the generality of them possessing complication of structure and function; such as the ovaria, the testes, the glandulæ prostates, the labia pudendi, and their neighbouring parts, the glans penis, the tongue, the lips, and the angles of the eyes. When cancer attacks even the inside of the cheeks, it is either found on the verge of some duct, or in the body of some salivary gland itself; or to arise from some continued mechanical irritation on these parts, as in the instance of a ragged tooth.

Even in those parts that are not markedly

complicated, and in which cancer sometimes occurs, still something more than the circumstances of simple structure attends them, arising from peculiarity of situation, such as the alæ of the nose; or pendulous parts, as the lobes of the ear and the scrotum.

I do not, however, feel myself bound to unravel all the minutiae attending the disease of cancer, as that more properly applies to an inquiry into morbid alterations in general, and which we know (by the mode of the natural functions) must originate in such extreme and minute vessels, that probably we shall never possess a more intimate knowledge of such obscure actions than what is afforded by analogical deductions. With respect, therefore, to the cancerous action, it is sufficient to show how the disease originates in parts evidently complicated, in order to account for such derangement in more minute, though probably not less complicated structures; as, for example, in the innumerable small glands of the skin, &c.

Cancer is never seen primarily or directly

to arise in simple structures. If complication does not exist in the first instance, it is progressively made up by disease, and then the cancerous state is acquired ; or, though a part may not be in itself a circle of complication (as the female breast), still its union with other structures of disproportionate powers, may amount to the same thing.

The necessity of such complication is further illustrated by the circumstance of scirrhus more frequently occurring in the stomach, near the pylorus, than in any other part of that organ. “ The principal reason of this probably is, that there is more of glandular structure in that part of the stomach than in any other ; and it would appear that glandular parts of the body are more liable to be affected with scirrhus, than parts of the body generally.” (Baillie’s “ Morbid Anatomy.”)

We have here evidence, from the first authority, for complication favouring the action of cancer ; and the same kind of evidence is afforded as to the periods of attack inducing

obstruction in the stomach, as has already been noticed in relation to the breasts and uterus.

" This affection of the stomach is not very uncommon towards an advanced period of life ; and, I think, is more frequently met with in men than in women. This, perhaps, arises from the greater intemperance in the one sex than in the other."—*Ibid.*

We have here the same high authority in support of the explanation that has been attempted with regard to the origin and progress of this disease. It is distinctly shown that the morbid alteration does not take place but "towards an advanced period of life," and more commonly in such instances where the greater degree of injury has been sustained ; cancers of the stomach being more frequently met with in men than in women, from the greater intemperance of the former. Such intemperance, however, is denied by Dr. Baillie to be *wholly* adequate to produce the disease. "There must be added (says the Doctor) a considerable

predisposition of the parts towards this disease."

This is a question certainly of some difficulty to determine.

It cannot possibly be denied that a stomach may be disposed to take on a cancerous action before a glass of brandy ever entered it, and that an excess of liquor might bring on a cancerous state of parts so previously disposed: but still it is a matter of no small difficulty to suppose, from this, a general predisposition *necessary* to the cancerous action; because, out of twenty brandy-drinkers, *one* only may have a scirrhus of the stomach. Two men, for instance, may run a race, and one, from the extraordinary exertion, may possibly bring on an aneurism of some large artery, whilst the other will escape unhurt. It may be said, that this man was predisposed to an aneurism from a weak state of the arterial coat; but this can only be a supposition, because we know that a violent effort can produce the disease in the strongest artery. So with

respect to two brandy-drinkers, one may drink a quart of brandy a day for twenty years, and at last die of a diseased liver, without any affection of the stomach whatever; while the other, drinking only half the quantity, might labour under a cancerous pylorus for years. But is there no way of accounting for this but by attaching a peculiarity to the one man which the other did not possess? Might not one stomach have a power of *resisting excitement* in a much greater degree than the other, and therefore have prevented a morbid change by preserving an equilibrium of action?

If cancer were a disease *suddenly* produced, then a predisposed state of parts might naturally be attributed; but we find it a disease always resulting, more or less, from long and continued injuries, progressively altering natural structure. I agree cordially in the opinion, that a man's stomach is more predisposed to take on a cancerous action after ten years irregular dram-drinking, than it was in the first instance. I also agree (if

the word is insisted upon) that a woman's breast, at a certain advanced age, is more "predisposed" to this disease than when she was much younger; or that the uterus of an aged woman is more open to cancerous affection than that of a young one; or that the prostate of an old debauchee is more liable to become scirrhouss than that of a young rake. But all this proves nothing with respect to the question of predisposition, as attaching that peculiarity to the cancerous action *itself*, which the author of the "Morbid Anatomy" would seem to infer.

The circumstance also of the number of cancerous stomachs being greater in men than in women, would appear to support the opinion that the disease arises directly from the continued excitement of ardent spirits, and not that there is any predisposition attached to the cancerous action in particular; because, if it were necessary to cancer as a diseased action, that there should be an inherent *principle* of predisposition, we should then have the majority of cancerous

stomachs on the side of women, inasmuch as ten cancers, perhaps, happen in women to one in men ; which predisposing ratio in women would overbalance the majority on the side of male dram-drinkers.

Considering, therefore, all the circumstances attendant on the cancerous disease ; that there must, in the first instance, be a deranged state of structure existing for a considerable time ; and that the cancerous action, after all, can be accounted for upon the common principles that govern natural actions ; and that there would appear, most markedly, an effort in the cancerous state (irregular as that effort may be) to relieve such derangement ; one cannot be led to entertain the idea of an inherent quality in the constitution for such action ; and especially since the opinion is wholly unsupported by any thing like a direct inheritance of this disease, from generation to generation, similar to what is seen in scrophula or gout, that can possibly be modified down into such predisposition. Perceiving, therefore,

every circumstance connected with the cancerous action contradicting instead of supporting such an opinion, one cannot but dissent, as the question at present stands, from the following assertion:—"Hence, (says Dr. Baillie) when there is no previous disposition, the stomach does not become affected with this disease, whatever be the intemperance."

The question therefore of predisposition in cancer can only be considered to rest upon certain periods, at certain ages, and in certain structures, and not upon any general, direct, inherent quality that one constitution may possess, exclusively, over another.

Speaking more directly to the nature of cancer, it would appear to be an accumulation of disproportionate actions in previously deranged structures, originally, for the most part, of complicated natures ; and the continuation of the disease would seem to rest upon the want of an equal concurrence of powers to regenerate. This is marked by the progress of the ulceration in general, as

well as by the cancerous structure; for healthy granulations will be shooting up in one part of a cancerous sore, at the same time that a sloughing of some fungus will be going on in another; so that an attempt at regeneration is evident in the action by the reproduction of fungus. For in all the cancers I have seen, after such sloughing, a healthy state of the part has been the consequence for some time, until the natural effort has been subdued by the continued irritation kept up, and the part has again fallen back into similar irregular productions.

In a case some years ago, when I was house-surgeon at the Middlesex Hospital, this reproduction struck me forcibly, and indeed laid the foundation of my opinion of this disease; viz. that it does not proceed from a specific poison, but simply from *altered structure and acquired actions.*

The case was a cancer over the frontal bone, and on the temporal ridge. In the progress of the ulcer, two exfoliations of the outer table of the skull took place, and in-

each there was a most distinct regenerating process; the arteries of the diploe threw out granulation as healthy as in any common case of trepan; the excavations filled up, and remained so; losing, at that particular part of the sore, the cancerous character, whilst the ulcer gradually crept downwards into the orbit.

It is here worthy to remark the uniform appearance of membranous septa found in cancerous alterations, as evidence of the disease resting wholly on deranged structure and acquired actions. These membranous septa have already been conjectured as a surface of extension for bony circles, and that probably such might be the mode of natural cure.

This supposition would appear to have some ground, because we uniformly find it attempted, and in many instances effected; and because it certainly would appear to be the best mode of stopping the disease in internal parts, and eradicating it in such as may have external communications.

There is another point certainly most worthy of notice, in support of the position of the disease arising from simple alteration of structure only; which is, that when a cancer takes place in scrophulous habits, it does not partake so much of its own peculiar character, but is marked by the same constitutional loose texture which is attached to the solids of scrophulous habits in general. Thus, in scirrhi of the breasts, in scrophulous habits, instead of that compact striated texture, with bony or cartilaginous centres, being found, more or less, according to the age and progress of the alterations, we have (as was noticed in Dr. Hamilton's case) more of a scrophulous cyst, containing a quantity of fluid, than a true scirrhus; and in many instances approaching to half-formed hydatids, with a cancerous fungus shooting up in some part of the cavity.

Here then we have cancerous alterations, partaking of a constitutional affection, in common with other parts; and, indeed, suffering, in some instances, a total change, or

rather obliteration, of structure. How can this be reconciled to the opinion, that a specific poison is necessary to cancerous disease? Does not such alteration of character show that, in scirrhous, though that equilibrium of parts which was necessary to healthy functions has been destroyed, yet that it still bears about it the same general nature as the constitution at large, and participates (indeed more than could be supposed) in all its varieties?

CHAPTER VII.

OF THE PROGRESS AND CIRCUMSTANCES OF ACTUAL CANCER.

THE *progress* of the disease of cancer affords the same line of evidence (with respect to altered structure and acquired actions) which has already been adduced for its *origin*.

As many varieties are observable in cancerous ulcerations, as in others; and such varieties show that the disease is not governed by any specific laws, but that it is open to the same impressions, and is governed in its nature by the same principles, which influence animal structure in general.

Thus, from the common circumstances attendant on the laws of irritability, or life, one cancerous tumor shall remain at a certain point through the term of forty years,

perfectly quiescent, and then suddenly take on a rapid action, either from some unknown excitement, or, as frequently, from some known injury, as a blow on the part; another, soon after its formation, shall rapidly increase to an alarming degree, and then as suddenly be resolved; or, perhaps, (still pursuing its career) shall burst into a raging sore, or, falling into a stationary indolence, shall present a fleshy protuberance posessing a very small degree of life, which is evinced by its sluggish growth and by frequent gangrenous crumblings from its surface: or, lastly, having burst the integuments, shall present a bony incrustation of half its projected surface*; while, in a third case,

* About two years ago I observed a case of this description in a woman who had a scirrhus of the left breast, high up near the axilla. The integuments had burst, and the tumor was half projected, giving an appearance of mouldering bone. There was no discharge, nor ulceration of the edges of the integuments, and it appeared as if nature was literally throwing out the part.

the progress of the sore may be regular and gradual, by slow imperceptible creepings of its margin for many years.

Such varieties of progress can only be accounted for by the various modifications of irritability and susceptibility that different cancerous tumors may, in the first instance, take into their œconomy, or afterwards acquire; as is observable in other morbid alterations, and in the temporary derangements even of natural structures themselves.

From the principles already laid down, it is very evident that any sore of long standing may possibly fall into cancerous action from morbid accumulation; and thus we find what are termed ill-conditioned sores have at length sometimes, though rarely, run into cancerous action.

Here then the same line of evidence is still afforded. All that is wanted to constitute cancer is some permanent obstruction in a part naturally complicated, or a constant state of disease in more simple parts, so as at length to produce new actions from

which may result the same thing. This, however, would rarely happen, and thus we find the evidence only supporting the bare possibility of the thing; because, in circumstances of simple formation, where the functions are not complicated in the part itself, so that the equilibrium could be easily deranged, as in glandular structure, there is so much power reserved, and ready (as it were) to correct any attempt at complication by an immediate excitement of simple action.

Adverting to the progress of cancer in general, it is characteristically *slow*. The ulceration will continue increasing, almost imperceptibly, month after month, through the space of five, ten, or twenty years, until the patient is worn out by the continual exhaustion, or destroyed (as frequently occurs) by other intervening diseases. A case that I have very lately seen has been standing in a state of ulceration seven years. Its commencement was no bigger than the smallest pea: this, unfortunately, the patient con-

sealed form any years, suffering it to increase; 'til at length it broke out into open ulceration: it now occupies a very large space on the right side, and over the breast, extending close up to the axilla. Within these few months, from the totally diseased state of the axillary glands by so constant a length of irritation, the absorption is so obstructed, that the whole arm, down to the fingers' ends, is œdematous, and has enlarged to a frightful degree.

In the progress of a cancer in a woman about sixty years of age, similarly situated, but not covering so large a surface as the one in the last-mentioned case, a tumor appeared about three inches from the margin of the sore, upward, towards the axilla. This tumor gradually increased for the space of a month, to the size and shape of a plover's egg: when the skin became livid, burst, and discharged a thin sanies: the body of the tumor, at length, entirely sloughed away, leaving a deep circular excavation, with regular and determined edges; the sore put

on no particular appearance ; there seemed but little or no action going forward : Though very indolent, it at length filled up, and remained perfectly sound for the course of a year ; until, by the imperceptible creeping of the cancerous sore, it at length became part of its circle.

This case is most worthy of notice, because it exemplifies the progress by which the chain of absorbent glands, in the course of a cancerous sore, become diseased ; not by specific absorption, but by the *irritation of continued excitement* : Had the parts surrounding this absorbent gland been considerably altered in their structure, a cancerous action *might* have been induced ; but the parts still retaining an equilibrium of regenerative powers, the gland sloughed and healed under the common circumstances of irritation ; which could not possibly have happened had cancer depended on a specific virus.

To account for the progress of cancer in particular, is to account for the progress of

morbid alterations in general, and even for the progress of animal structure. "Contamination," in cancer, appears to me a very obscure and feeble expression to the point; because it implies a very material change, without expressing the nature of the thing, or by what means such a contamination of parts is effected.

In more simple alterations, a disposition is always evinced in the surrounding parts to take on the same action. Thus an inflamed spot increases its circle by exciting the surrounding vessels into the same increased action; or if bony deposition takes place in the minute vessels of a part, however circumscribed in the first instance, the influence is generally extended to the surrounding vessels, and the same deposition is detected to a considerable extent; thus when the *vasa vasorum* take on this action in large blood-vessels, several circles of the same deposition are to be met with. I have seen a chain of bony concretions, at small distances from one another, extending through the whole

course of the femoral artery, so that there would seem to be a specific excitement in morbid alterations, to stimulate the vessels of neighbouring parts into similar acquired actions ; and, in this way, it would appear obvious that the progress of the cancerous sore is effected by circle after circle, taking on the same disposition from previously altered structures.

The offensive smell of cancerous sores would appear to have been much exaggerated. Undoubtedly where there is an extensive sloughing of animal matter going on, an offensive effluvium must arise ; but this is certainly neither so common nor so extensive in cancers as would seem to have been considered. I have not been so much annoyed by ten cases together, in a cancer ward, as where there has been only one extensive gangrene going on. Indeed a cancerous surface does not, at any time, afford the quantity of matter which a common ulcer would, of the same extent. The secretion is frequently spare, a thin ichor being more

the characteristic of cancer ; though I have also seen the discharge on the surface of such sores, as good, to all appearance, as pus in common ulcers. The discharge, in fact, evidently must depend on the varieties the sore itself is subject to : If under a great degree of irritation an erysipelatous disposition comes on, the matter, of course, must be spare and ichorous, as is common to such affections ; but when such disposition is corrected, which is often done by some partial sloughing, or when such erysipelatous disposition arises from the irritation of some tendon coming away, when that is thrown off, a comparatively healthy state of the sore ensues, and the return of an improved discharge is the consequence of the irritation having subsided.

CHAPTER VIII.

OF THE RECURRENCE OF CANCER.

PURSUING the question up to the last stage, the *recurrence* of cancer, near or in the same part (after a scirrhouſ tumor has been taken away and healed) is explained upon the same reasonings which have already been offered for the *origin* and *progress* of the disease. It must be obvious that the disease arises from such small beginnings, that, unfortunately, it can never be detected until the obstruction has made considerable progress; and as no specific virus is with it, so as to afford any peculiar evidence from which one might take the alarm, the disease thus proceeds securely in the minute parts of structures, until such a circle of alteration

is acquired as to make the change evident to the touch: But the change, so far from having just *begun* at that time, is then *confirmed*; so that when a surgeon takes out a scirrrous tumor, though of course he can *detect* what is very *evident*, it is impossible for him to act beyond the reach of his perceptions, and discover changes which can only be imagined; which may be there, or may not. Thus he can detect a gland that is so confirmed in disease as to afford him a perceptible hardness and enlargement, but he cannot detect one where the change has just commenced, though precisely under all the promise of the former.

It is therefore the melancholy (though natural) consequence, where parts have been the seat of morbid alteration and acquired actions through a length of time, as in cancerous accumulations, that it is utterly impossible to ascertain the distinct line between health and disease; and that in the extirpation of a scirrus, notwithstanding the mi-

nutest examination human skill is competent to, some portion may possibly be left, from which (the due equilibrium of the actions necessary to health being destroyed) the disease may ultimately recur.

CHAPTER IX.

OF THE TREATMENT OF CANCER, ON THE PRINCIPLE OF NATURAL SEPARATION.

WHEN it is recollect, that in general, cancer is the result of long standing alterations in the most important and complicated structures, and especially when it is recollect that this disease more frequently occurs at those periods of life when the energies of the constitution are worn and languid, it must be very evident to the most sanguine expectations that this disease, though the treatment of it may in future be greatly improved, must still, in many instances, fall short of all possibility of cure.

But is it to be said that, because of such difficulties, according to the difficulty so shall be our indifference? Are we to relax in effort, because effort is more required Shall

we withhold what *can* be done, merely because all that we wish *cannot* be done?

Such, however, seems to have been the desperate sentiment in which science has left this disease almost to itself. All serious and regular inquisition concerning its nature, its necessary connexions and dependencies, and its action, has been avoided: It appears to have been considered as a thing so deeply rooted in its own sin and wickedness, as to be beyond the hope of reprieve—a hardened malefactor, denied *every consolation* but that of the *knife*.

This negligence on the part of science has given proportionate scope to the invention of the quacks;—they seized upon the arms the regulars threw away, and have certainly played no unsuccessful part. Even old women, enlisted under the banners that were deserted, have proved at least (as far as their knowledge of the question went) that there is just as much orthodoxy in a piece of caustic as in a piece of iron!

When Mr. Guy adopted the Plunket re-

medy, the empirical *secrecy* he observed in respect to its essence struck a mortal blow to the exterior credit of a practice, which yet, under every disadvantage, proved really and eminently successful.

The correspondence of Mr. Guy with Mr. Gataker, (surgeon to the king at that time) merely teems with personal invective, and (not to mince the truth) defends this remedy with all the violent assertions of quackery, anxious at the same time to bury the treasure still deeper. Nor was the correspondence much more honourable on the side of Mr. Gataker; he seems to have combined more virulence, with less argument, even than Mr. Guy*. Instead

* A curious contradiction would appear in the conduct of Mr. Gataker. He anxiously sought, and endeavoured to imitate, the very thing he so vehemently condemned; and the failure of his imitations seems to have been the true origin of his marked hatred against the success of Mr. Guy's practise: else, why should Mr. Gataker be using caustic applications, at the same time that he was throwing opprobrium on Mr. Guy's remedy, because it *was* a caustic?

of a regular enlightened procedure on the part of Mr Gataker, to do away what he might consider an ignorant innovation, his attack upon Mr. Guy was marked with little jealousies and unfounded insinuations. Argument gave place to bold assertions, and the cause of science and public utility was deserted by both parties for the gross indulgence of individual aspersion. Thus posterity seems equally obliged to these two gentlemen : to the one, for condemning a thing of which it is very evident he was totally ignorant ; and to the other, for the warm support of what it is equally clear he did not understand, or (which would seem still less innocent) of what he *did not choose* to understand. Mr. Guy having bought the Plunket receipt, appears to have been determined to support it at any price—even by the sacrifice of his character as a surgeon, in stooping to the mysterious artifices of a *secret* remedy. In such circumstances, it is obvious no great light could be thrown upon the disease itself, or upon the means by which the remedy

really acted : On the contrary, it must be evident, that if Mr. Guy had illustrated the nature and manner of his cures, he would virtually have disclosed his secret ; and accordingly, in his answer to Mr. Gataker (as if conscious of the danger of *illustration*), we find him talking more like a magician than a surgeon ; and, by throwing obscurity upon the disease itself, in every possible way (descanting on “its roots,” and “seeds,” and “the state of the juices”), would seem to infer, by such mysterious phrases, that his remedy, in short, was nothing more nor less than a *charm* ; while the only natural agency that his remedy could possess was virtually done away by his flat denial that it partook of any of the qualities of a caustic !

Under every disadvantage, however, we find the intrinsic worth of the Plunket remedy establishing itself on the cure of several hundred well authenticated cases.

This famous secret, at length, became tolerably well ascertained. Its chief ingredient was found to be arsenic. This intro-

duced a general practice of arsenics and caustics ; which, considering the unqualified and indiscriminating way in which they were applied, were attended with more success than could have been looked for. Their ill success, however, in many instances, from that very cause, at length threw the whole practice into disgrace ; and what promised, and indeed had in many cases performed, so much, was dismissed rather from petulance than conviction at last. For it must be obvious that a just appreciation of the merits or demerits of such a practice, could only have been afforded by an intimate knowledge of the nature and various relations of the disease itself; which at that time (I believe) will be admitted to have been exceedingly deficient.

It must be evident that, although one common principle governs the healing of all simple ulcers, yet if all were treated precisely the same way, and with one unvaried dressing, without attention to the symptoms and varieties they incessantly exhibit, we

should soon find our very best means ineffectual ; and therefore it cannot be wondered at, that the practice we have been alluding to failed so much in a disease, the real theory of which had been so little considered or inquired into, and where one invariable application had been made use of in every stage, state, and disposition of it.

The past failures of caustic applications, therefore, cannot authorise the total neglect of them in cancer ; because, to this day, *extirpate* scirrhi how we will, the recurrence of the malady is but little if at all less frequent.

From a review, therefore, of all the circumstances connected with the question, it becomes a matter of duty at least to reconsider a principle (and endeavour to accommodate its application in practice) which has such undoubted claims to serious attention, and which appears to have suffered disrepute more from injudicious applications of it than from any unfitness in itself. A man saying, I cannot use this thing, by no

means proves the thing itself useless; for, to another man it may be the very thing he wants. So with regard to the caustic treatment in cancers. Is the principle entirely to be defamed, because its application has failed in some hands, and in some instances? May not practitioners have sometimes wanted ingenuity themselves? That this application, although it has succeeded in many instances, has aggravated the evil in as many others, cannot be a conclusive reasoning for relinquishing the principle altogether. Its application then should be modified, and the practitioner should teach himself to vary the light and shade of his practice to the existing symptoms and necessities. If he will not condescend to do this, and endeavour, by perseverance and attentive practical observations, to surmount the difficulties in his way; but, on the contrary, will, in mere desperation, or in mere idleness, throw the whole up, he can only be considered as a child quarrelling with his puzzle because he cannot fit all the parts of it together.

Caustic applications in cancer, were ushered in under the equivocal sanction of a nostrum ; they were pursued as a nostrum, and then they were turned out as a nostrum. All regular inquiry has been withheld from the merits of this practice ; and because it did not succeed in all things, its efficacy was not allowed in any. Thus transferred from the irregulars to the regulars, it was turned back to its original holders ; and certainly, if being taken up into regular practice may be considered as preferment to a remedy, it might, for any advantage it gained in the course of its various translations, have exclaimed, in the words of honest Sancho, that “ Pennyless it came into place, and pennyless it came out.”

Fortunately, however, the principle of this practice still remains entire, and it is possible that, by rational applications of it, a regular mode of curing the formidable disease of cancer may yet be established by the means of natural separation.

CHAPTER X.

THE QUESTION OF NATURAL SEPARATION CONSIDERED ABSTRACTEDLY, AND ITS POSITIONS ESTABLISHED IN THAT POINT OF VIEW.

IF it be admitted that the disease of cancer arises progressively from simple alteration only, which it would appear to do, because no part of the human body becomes the seat of cancer, either directly or indirectly, until it has suffered an evident change of its original structure ; and if it be admitted that the cause of such alteration has been known to arise by accident, and that the progress of the disease itself rests upon the simple known principles of alteration in general, then the disease of cancer must (consequently) be reduced to the same level, and be open to all the general circumstances attendant on morbid alterations that do not depend upon specific virus.

An attempt merely to alter the action in cancer must evidently fall short of the purpose of cure ; because the disease itself rests not only upon acquired actions, but upon altered structure likewise ; such an attempt therefore would only go to excite a diseased mass to *natural* action, the very principle of which action *must* have been previously destroyed.

All such attempts therefore can only be considered as *palliative*. A *radical* treatment must not only strike at the *action* in cancer, but at a complete *separation* of the morbid structure.

The principle of such a treatment is established in the laws that are invariably observed in the animal economy in general. Natural separation is effected when a part is excited into an action beyond its vital power; which is grounded on the following position, viz. that no local action can be supported beyond the living principle of the part.

The principle of natural separation, ap-

plied as a treatment in cancer, is still further strengthened by this other position, that all newly-formed parts have less of the powers of life than original structures; so that an excitement can be more readily effected in such new formed parts than in original organization.

And thus, in truth, the principle of such treatment in cancer would be nothing more than a combination of two general principles of nature, which are uniform, constant, and inviolable.

CHAPTER XI.

NATURAL SEPARATION IN CANCER CONSIDERED
PRACTICALLY.

WE will now suppose it to be demonstrated that a radical treatment for the cure of cancer may be established by the means of natural separation. We have daily experience that this is the mode by which nature throws off a part become useless to the purposes of life; and we know that such separations can be effected in parts the most healthy, by exciting in them an action beyond their living principle to support Hence then we derive a positive general mode of cure. Clear and evident, however, as the principle is, when we come to apply it in practice, innumerable difficulties arise; many of them, no doubt, from improprieties in the mode of application itself, and perhaps almost as

many from circumstances connected with the disease, that are and ever will be difficult, sometimes insurmountable, in themselves.

Difficulties may arise in *effecting* the separation. In many instances, instead of completing that purpose, our attempts to produce the due excitement may fail, and our very means may become new causes of irritation: or, on the other hand, the morbid alteration, in many instances, may so far extend as to confound parts, the regular existence of which may be necessary even to life itself, and where of course the consequences of separation would be fatal.

In a general practical point of view, then, the remaining difficulties in the cure of cancer may be reduced to the following heads: 1st, Obstacles which progressive practical improvements may enable us to remove; and, secondly, those which would appear to be insurmountable in their *natures*.

These considerations may lead us to a selection of such means as will simplify the circumstances of the disease,

and reduce its nature, as much as possible, to answer to a direct state of simple excitement. Where this can be effected, the certainty of a cure must be established ; because the practical difficulty being done away, all the rest is secured by the abstract necessity of the principle.

In general, then, the mode by which this important end is to be attained, is to promote and regulate excitements to the necessities which may exist ; and (which is of no less importance, and is always supposed to be in our power) to lay hold of such cases as have been of shortest duration, and where, consequently, the disease, not having arrived at a complicated state, will present fewer difficulties, and afford so much more scope and facility to whatever treatment may be proposed.

It is obvious that on these two points the failure or success of the treatment, in all practical cases of cancer will ever depend, On the one hand, as far as the disease withstands one common general excitement of

the whole, so far the cure must be imperfect; and, on the other hand, whenever the due excitements can be effected, and where the disease can be taken up at that early period when it is under the common circumstances of simple tumor, the cure cannot fail of being effected by the means of natural separation.

CHAPTER XII.

OF REGULATING EXCITEMENT IN COMPLICATED CASES.

THE basis (generally) of all the arsenical caustics used in extirpating cancerous tumors, has been equal parts of sulphur and arsenic ; and this appears to have been the ratio of the preparation, be the duration or the state of the scirrhus what it might. It must be obvious that such a caustic can only act to a certain extent ; and that, therefore, if the morbid organization should extend beyond the range of that action, the separation must be imperfect ; and that what was before occult, must now be brought into a state of open disease, by a sloughing only of *part*, instead of the whole, of the morbid substance.

The state, therefore, as well as the dura-

tion, of the disease in the part, should be considered ; because, in some instances, the alteration may be more extended in twenty months than it may be in others in as many years ; and such circumstances should of course regulate the strength of the caustics employed, and the expediencies of repeating them.

Arsenic should seem to be one of the best calculated means, because its action is more extended than the common caustics in general ; that is, it produces a separation of a scirrhus from an increased excitement through the *whole* tumor, and does not, like the common caustics, immediately deaden the surface in contact with it ; a circumstance which must of course greatly detract from the effect of separation, because a speedy production of an eschar must, of necessity, defend the parts beneath, from the further progress of excitement.

That the action of the arsenical caustics arises from the excitements they produce, is corroborated by their not affecting the cuti-

cle; in order to which, therefore, some escharotic must be previously applied.

There is an old preparation, called the *Magnes Arsenicales*, which, from its effects, seems to combine a very happy medium; its action extends beyond the common arsenical applications; and, by destroying the cellular membrane, immediately surrounding the scirrhus, the tumor is most dexterously extirpated. The good effects of this preparation should seem to arise from the antimony that enters the composition, the magnes arsenicales (as it is called) consisting of equal parts of antimony, sulphur, and arsenic melted together.

As the good effects of this preparation evidently arise from the activity it borrows from the antimony, perhaps simply adding tartarized antimony, in the same quantity as the sulphur and the arsenic, will be a proportion that may answer all the purposes, and supersede the necessity of using any previous escharotic for the removal of the cuticle.

The applications to scirrhi, when in an open state of sore, would seem to require considerable modification.

In the extirpation of a scirrhous tumor, the applications are made to sound integuments, and the tumor is destroyed by the increased action that is produced ; but in the cancerous sore, we have not to act upon healthy integument, but upon a diseased surface ; so that, if circumstances should induce one to attempt a radical cure by the separation of the whole altered organization, his means must be modified to the surface in question, and not one common application employed for two widely differing states.

If a strong caustic is used to a cancerous sore, of course the evil will be aggravated instead of meliorated. Before three lines of the diseased mass could possibly be affected in depth, the whole surface would be an eschar ; and thus such a practice would strengthen, not diminish, the morbid production. Upon the falling off of the eschar, the fungous granulations (from such tem-

porary and partial clippings) would shoot up with redoubled vigour; and thus new grounds would be given for condemning the practice, merely because its principle had been abused.

It often happens, even in simple fungous productions, that a great deal of trouble arises in keeping down their growth, which is frequently accelerated, instead of being checked, by the use of caustics; and this too simply arising from such loose productions having less powers of life, and from the caustic only acting partially on the surface, instead of stimulating the whole mass to an increased action. The growth of warts evinces many curious phænomena illustrative of the laws of irritability. A gentleman mentioned to me that he had a wart on his right temple, which became very troublesome, and was increasing rapidly. Nothing was done to it; but, in a short time, the top became gangrenous and sloughed. The same was observed in the course of a few days on the surface which then became exposed, and

in this way it entirely disappeared to the base. In others I have seen the same thing produced, but in a more speedy way; a spontaneous increased action has come on, and the whole excrescence has sloughed at once.

One common principle, therefore, governing morbid productions in general, if the practicability appears in any way supported, the attempt at a radical cure of a cancerous sore, should be regulated by the known necessities of the case. Thus, the applications employed, should be modified to the powers of the diseased surface, where it is evident the living principle is but sparingly distributed, and the partial destruction of which must give energy to the whole mass.

From such considerations we find the failure of what has been called the caustic practice, explained; particularly when many practitioners have even used the lunar caustic. The immediate and partial destruction that attends such a practice, must aggravate

the disease, and indeed reduce the thing to the same level as *cutting* in diseased parts.

It has been more than once observed, as an objection to the extirpation of cancers at all, that many cases, where, unfortunately, some of the morbid structure has escaped the knife, have been greatly aggravated after the operation has been performed. In all such cases the same ground of explanation is afforded. Burning a diseased surface, and cutting a diseased surface, are in effect the same thing.

In attempting to cure a cancerous sore, the grand object will evidently be to stimulate the whole mass, and thus to exhaust its living principle by a continued increased excitement. In fact, the morbid alteration effects its own destruction ; and if the separation is not effected *at once*, but *progressively*, as in the first instance of the wart, by surface after surface, such separation must be the result of general effect, and not of partial destruction. Such gradual separation,

from the excitement of the whole mass, in a cancerous sore (though a diseased surface still becomes exposed) would produce effects very different from those which would follow in the instance of partial separation from the immediate destruction of the surface only. There the part only is excited and destroyed; but, in the instance of general excitement, the surface sloughs from the languor of the whole; and the temporary energy that might arise from such separation would only add to the expediting of the *same thing* in the surface that would now become exposed, by inducing an *increase of that action* which was *already* beyond the powers of the morbid alterations to sustain.

This is exemplified in the first case of the wart. Its growth had proceeded beyond its original powers of life; an increased action was produced, and from the consequent exhaustion its surface or top became gangrenous, and sloughed. The action still going on, the living principle of the part was at

length wholly exhausted, and a natural cure was effected by the sloughing of its base.

The experience that may result from numerous and well determined efforts may therefore reduce the curative practice by excitement to far more accurate proportions and qualifications; in time, to comparative certainty; and the arsenical applications, perhaps, may thus be modified. A French emigré had a cancerous sore on the inner canthus of the right eye; the case was treated by some man of his own country, I think a priest, who professed to have a remedy for cancers; a cure was certainly effected. I saw the case two or three times. The progress seemed to be the destruction of surface after surface; and I can say, with tolerable certainty, that arsenic was compounded in the applications that were employed.

From this principle of excitement, the success of the small red onion, where it has answered in some cancerous sores, must have altogether arisen. I observed an evi-

dently successful application of it in a case of an old man, who had a very suspicious sore, and great enlargement of the under lip. The sore, however, could not positively be said to be cancerous, although it was certainly more like a cancer than any thing else. Indeed it seems difficult to determine, in some instances, the degree of complication necessary to constitute cancer. This sore undoubtedly would have been called a cancer, had it proved to be incurable; but as this was not the case, and as the old man returned to his family in the country, with his lip nearly well, that result may be a sufficiently cogent reason to convince *some* people that the sore in question was not a cancer.

Nothing, perhaps, has appeared better calculated for exciting the cancerous sore than the sabina. It evidently produces more increased action, with less irritation, than any thing yet employed. Upon this principle it is the best possible application for venereal warts, where the caustics

and other corrosives only increase their growth. When used for perpetual blisters, the discharge it keeps up is considerably beyond any that is produced by the cantharides ointments ; and it is equally successful, where the others have totally failed even in keeping the blister open.

I shall now offer a few observations on excitement, considered as a mere *palliative* remedy in cancerous sore.

The best professional experiences evince that many cases have been aggravated by the use of cooling and sedative applications. It must be recollectcd that pain does not always arise from a direct state of inflammation, but that it may also arise from morbid irritability. In the one instance, of course, what will reduce a direct increased action of the vessels of a part must diminish the pain, and in such cases the antiphlogistic process will answer ; but, in the other instance, where the pain does not depend on any such cause, but upon an undue relation of powers, (which amounts to the same thing, whether

it depend on the want of a due proportion of irritability, as the principle of life, to answer stimuli; or, on the other hand, depend on an unequal and disproportionate accumulation of the living principle, more than sufficient to answer the *stimulus of action* of the part) the antiphlogistic plan certainly cannot answer. The only remedy, in such cases, would be to stimulate the vessels of the part to relieve debility, on the one hand; and, on the other, to exhaust the undue accumulation of the living principle that had become more than necessary to answer the ordinary action it had to sustain.

In a cancerous sore the pain must depend upon some similar cause; its actions must all be of an erysipelatous kind. In a state of such confused morbid organization, it is impossible that a direct inflammatory action can take place; and therefore the saturnine applications, so often used in cancerous sores, must often aggravate their state, by increasing the vascular debility on the one

hand, or by augmenting the principle of irritability into disease, on the other*.

These circumstances of morbid irritation are often evinced in many species of sores where the pain is only relieved by stimulating applications, and often requiring even the caustic to be generally applied to their surface, before their exquisite state of irritability has subsided. The same is often observable in erysipelatous attacks on the coats of the eyes, and where the irritability is markedly aggravated by an antiphlogistic treatment. A severe case of this kind came under my notice : a lady was seized with a violent inflammation of the tunica conjunctiva of the left eye, the vessels became turgid with the red globules of blood, attended with great pain ; every effort to lower the action, with zinc-washes, and the use of the

* A tolerably strong solution of the argentum nitratum with alcohol, in the proportion of one ounce to six ounces of rose-water, I have found of great service in relieving the pain and bettering the discharge.

vinum opii at times, proved ineffectual ; every symptom became aggravated ; an erysipelas seized the cheek, puffed up the eyelids, and covered the temple, and part of the forehead. In this state Dr. Vaughan saw the patient ; and to that enlightened physician I am indebted for the knowledge of the practicability of excitement in a much greater extent than I could have supposed. The lotion that was constantly kept, upon linen rag, to the parts, and covering the eye, was equal proportions of liq. vol. cornu cervi, and aqua rosæ ; this ardent and highly stimulating application proved to be a most soothing remedy, and the attack had wholly subsided in the course of a few days.

I have observed the same success in some other cases of inflamed eye, particularly in a young lady, who had been leeched several times, for many months, whilst in the country at her father's seat. Upon her return to town the complaint was considerably worse ; she could not bear a lighted room without a great degree of heat and irritation of the

eyes, with redness and thickening of the lids. In this case the hartshorn lotion removed the irritability ; and, had the patient given up routs for a short time, the effects of course would have been more immediate.

From such evidence, and from the burning sensations and erysipelatous attacks so often experienced in cancerous sores, I am induced to suppose that a stimulating treatment is better calculated for it where the symptoms evidently arise from morbid irritability, than the antiphlogistic one, which can only suppress *increased* action depending upon *direct* excitement.

CHAPTER XIII.

OF CONSTITUTIONAL AND AUXILIARY
REMEDIES.

THE grand medium through which constitutional remedies in cancer appear to act, are the absorbents. By them scirrhoue accumulations are often removed, so that before any attempt is made to take away the diseased part (unless the urgency of the case be great) every exertion ought to be made to resolve the disease that way.

On the activity of the absorbents, probably, the removal of those attacks on the uterus which have been said to be cancerous, may wholly depend. In these cases an alterative plan has been pursued ; the absorbents have been excited, and a removal of the morbid change has been effected ; or, according to the principle offered and attempted to be established by this essay, the proper struc-

ture and action of the deranged part have been restored. The internal exhibition of arsenic is said to have proved successful. This is given on the authority of Le Febure, a French physician.

In cancerous as in other local diseases various states must necessarily exist, and be considerably influenced by the general dispositions of the habit. Constitutional and local applications should therefore be ever in unison, and the general health of the patient be regulated with the local treatment of the disease.

Although the attempt at resolution, by alterative combined with local applications, (as the acetated ammonia, mercurial frictions, and the use of leeches,) may often prove ineffectual, yet such treatment can never be considered as wholly useless. If the diseased part is not entirely relieved by means of the absorbents, still the surrounding parts must be rendered considerably more healthy,

It has already been shown that a local

disease may have pursued its course, and shall even have arrived at the complete morbid state, ere the diseased alteration shall have been perceptible either to the sight or to the touch. Hence then it becomes a point of sound practice to pursue an alternative plan, and to rouse the absorbents by emetics, even though the removal of the scirrhus should have been previously determined on ; since, by such means only, a resolution can be effected of that obstruction which takes place in the minute vessels of such obscure structures as are immediately connected with the tumor, and which may ultimately cause the recurrence of the disease.

A rational combination of means, therefore, constitutional as well as local, is necessary in the treatment of cancer. The same principle governs both ; and it would be as improvident not to employ them, as it would be to attempt the cure of many ulcers without the auxiliary corroborant of cold bathing, or the internal use of the bark.

CHAPTER XIV.

OF THE ADVANTAGES OF VIGILANT OBSERVATION AND TREATMENT OF SCIRRUS IN ITS EARLIEST STAGES.—CONCLUSION.

If in the origin of a scirrhus there is that state which may be called a state of simple tumor, an object of the most serious moment presents itself to our consideration; and the practitioner becomes bound, by every tie of honour and humanity, to promote, with his best exertions, those means which may save the sufferings of his fellow creatures, by destroying the disease in its infancy.

The following observations will be more particularly directed to the diseased formations so frequent in the breasts of women, the parts in which the cancerous disease seems to have fixed its favourite abode. How frequently do we find disease and deformity

thus fostered in the very bosom of beauty and of health! Why? Because either they dread the horrors of incision, or they are ignorant of the dreadful consequences that may follow the smallest knot, if neglected. Many cancers of the uterus might undoubtedly have been prevented, had due attention been paid, and a course of injections and alternatives been resorted to, in the earlier stages of the malady. The most horrid state of leucorrhœa has been suffered to come on, from the early symptom being considered as a simple debility, and *therefore* of no consequence. To prevent such concealments as much as possible, the female world cannot be too earnestly informed of the danger which attends them; and of the serious urgency (far paramount to all the delusive considerations of a false delicacy) of promptly disclosing their slightest apprehensions of any such formations taking place; at the same time that every assurance should be given them that, by early recourse to professional discernment and skill, these distant

approaches of disease may be easily and pleasantly dissipated, and all the dangers and mischiefs they might otherwise lead to, seasonably averted.

I have thus far studiously avoided any thing like *comparative* disquisition in respect to the modus of curing cancer. I have pursued the object of these inquiries in a direct view, and (with the best exertion of my humble ability) have, in this way, asserted and endeavoured to prove what the question really is. I will not even now fall off from this simple course, nor entangle the question by any such comparisons ; yet I must so far notice what I consider as indispensably due to the cause of truth in so serious a subject, as to observe, that so long as the extirpation of scirrhi of the breast is performed by the knife, so long we shall have the disease fostered in secret ; and, in too many instances, procrastinated beyond the point of safety, through the dread of an operation that is inevitably, because naturally, dreadful. For the operator may argue till doomsday, ere

he shall persuade his patient that cutting the breast with a knife, is a mere nothing, a flea-bite, and so on. This rhetoric never gained a jot on the fears of ignorance, or on the quick feelings of diseased delicacy. The truth is, that when the operation is submitted to, the mind is seldom made up to it but as a last resource, (perhaps under a total privation of hope,) seldomer from the convictions of reason, and never from an absolute command over the natural terrors of the heart.

Such circumstances demand at once all the energies of science, all the zeal of humanity. Let me once more ask, Is there not that state of scirrhus of the breast which is a state of simple tumor? Let me once more venture to answer, It is demonstrable that there *is*; that a certain removal of such symptoms may be promoted by ordinary means, founded only on more considerate and accurate attentions to the disease, at the periods of its simple formations; and that cancer may be exterminated, even in its more

complicated advances, by a skilful management of Nature's own voluntary process, (continually recurring to our view, and demanding only the passport of facilitating skill,) the separation of dead matter from living action.

THE END.

APPENDIX CHAPTER.

ON THE OPINION OF THE CANCEROUS TUMOR
POSSESSING A POWER OF GENERATING A
SPECIFIC POISON OF CONTAMINATION.

It certainly would not be very irrational to suppose, à priori, that after it has been established that cancer can arise from simple external injury, and that the effects of its matter by inoculation are wholly unequal to produce a disease *sui generis*; the idea of a specific poison in cancer should be entirely done away. Yet, however, to suppose this, would be to suppose the very contrary to what really exists; since out of the old materials, as it were, a more œconomical opinion on specific virus in this disease, is built up, viz. the supposed power of a cancerous tumor generating a specific virus for

itself. This opinion has been pursued even by those who have proved the accidental origin of the disease: such specific poison is applied to the purpose of further contamination in the individual*.

The history of the disease does not furnish any direct evidence for this supposition; and it is wholly destitute with regard to any analogical inference. No known specific disease ever arose, directly or exclusively, from accident: such independent creation never originated, for example, in any such instance, from a blow. Are we not authorized then to say that such a creation in cancer savours more of the poet's license, than of scientific investigation? The authors of such poetical opinions have carried their hero to the utmost stretch of human probability; and, on the failure of

* Mr. Home, in his late publication on cancer, gives this power to a cancerous tumor, although he establishes the *accidental* origin of the disease.

this, have invoked supernatural agency, and ingeniously rescued him by the intervention of a cloud. How can we imagine the generation of a specific poison in a cancer (at a particular period) which has been proved to arise from an accidental cause? Every natural and probable circumstance combines against such a creation: the question is left wholly destitute of proof; and who has the most creative powers, in such an exigency, will best befriend it. Every surgeon may thus make a disease for himself, and, instead of fashioning his means to that disease, may fancifully adapt the disease to his means.

Simply anxious for truth, I cannot therefore admit, or pass by, these easy substitutions of *fancy* for science. Is a swelled absorbent gland, or a whole chain of swelled glands, in the neighbourhood of a cancerous tumor, sufficient to infer that they have imbibed a specific virus of contamination? Nor if, in the course of several years, the

skin were at length to ulcerate, and the parts were even to run into a cancerous action, should we be authorised to say that such action arose from specific absorption. Why should a poison be more necessary for the contamination of the parts in the second instance, than what is observable in the first? A cancer may, in the first instance, be produced by mechanical *injury*, as a blow, or a pinch, or an irregular pressure: we cannot here possibly suppose an infused *poison*; then why not admit simple *irritation*, in the second instance, to be equal in effecting the same thing?

The *structure* of scirrhi shows nothing like a specific arrangement for the purpose of secretion: even in the most regular, nothing more is afforded than an evident power of converting parts into bone. This generally is found to be more effected according to the *duration*; and commonly the *centres* are more advanced in such progress. Now it would seem that, as this poison of

contamination is secreted only when the tumor becomes confirmedly cancerous, the centres, of course, would be the first calculated to take on such specific process; such parts being more confirmed in the morbid change. But what do we find? Simple cartilage. In truth, if there is a poison generated in cancer, it reduces the common character of specific virus to nothing. If cancer contaminates by an absorbed poison, so does whitlow ten times over; so does the irritation produced by a splinter under the nail!

The deductions of *chance* exclude the possibility of a specific poison generated in cancer. From what we know of glandular œconomy, a particular arrangement of vessels is necessary to the generating of a particular secretion: thus, no man ever had a salivary gland supplying the place of a testis. An identical arrangement of vessels (then) evidently appearing necessary in all instances where identically the same fluid is to be produced, how can we possibly sup-

pose this to take place in cancer? How can we suppose "chance" so to regulate, that the same ratio of injury, and the same specific disposition of vessels, shall take place in three cases of cancer in the female breast, each of which shall have arisen from a different cause; one, for example, from the poke of a clown's elbow, a second from the too ardent pressure of a lover's hand, and a third from the point of an odious whale-bone busk? Therefore, supposing it even to be proved, that a certain ratio of mechanical impression could produce a certain arrangement of parts (as is proved with regard to the vibration in a musical chord), surely it cannot be contended, that, in each of these cases, identically the same specific arrangement will be produced by the random action of the clown's elbow, by the ardent pressure of a hand, and by that of a piece of whale-bone, any more than that the same sound can be produced on three different strings of different tensions.

It has been supposed by some, that the

lymphatic liquid found in many of the varieties of scirrhus (which I have already adverted to in the chapter "of the progress of cancer, with respect to scrophulous influence over cancerous formations") was the true (and as it were *rectified*) cancerous poison: but this opinion was as easily laid down, as it was taken up. In short, when we talk of a cancerous tumor secreting, at a particular period of progress, a specific poison, we can only talk upon supposition, because there is not a shadow of proof afforded by the cancerous structure; but most positive evidence, on the contrary, against such a notion; and because there is nothing in the whole progress of scirrhus which marks with the smallest tittle of identity, that "particular period" with which we seem so very familiar.

Mr. Home has carried his opinion of contamination by cancerous poison, to a great extent. According to his idea, no part, no formation is safe; and, indeed, that there can be no criterion formed with re-

gard to the period of safety. It is, however, infinitely gratifying to perceive some promise, that the real science of cancer will at length be regularly prosecuted. Mr. Home's name will be a tower of strength, and his interposition will be the means of convincing many who require some authority to guide them, that the disease is, at least, worthy of the most serious attention. In the "Observations on cancer, connected "with the history of the disease," the question, however, is certainly finished before it is well begun. "Contamination" being taken for granted, the history of the disease is confounded; and appearances in the course of the absorbents are accounted for upon a specific principle, which, I have contended, might equally have arisen from common absorption or irritation. It is very evident that the author's notion on contamination in cancer, is wholly unsupported, even in his own mind; and that it is only a supposition, to account for the progress and recurrence of the disease; because he tells

us that he was fully persuaded, until facts convinced him of the contrary, that "such cysts (alluding to cysts often found in cancerous formations) contained the cancerous secretion thrown out from the different parts of the tumor with which they were connected ; and therefore, that they were not only subsequent to the formation of the tumor, but an incontestable proof of its virulence, and of the advanced stage of the disease."

The author's opinion on scirrhus secreting this poison of contamination, is by no means so well supported as the one he has just given up, of the mode in which the supposed virus was contained, in some instances : *there*, he was supported by some anatomical uniformity : there was a bag, and something of apparatus, to bear him out ; but where is this uniformity in the jumble of cancerous structures in general ? When, in the course of his exquisitely beautiful anatomical researches, this

eminent practitioner can prove a specific, adapted arrangement of parts in all scirrhi, then, and then only, I think, will he be authorised in the supposition of their being bodies adapted to the peculiar secretion of a self-generating virus.



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